critical issue in the start-up phase," said Hank Weiss, Director of Wisconsin's Injury Prevention Unit. "In the early stages, an injury control program should go where it is best sustained and supported."[5] State and local health departments may be the natural home for injury prevention and control, but they are, nationwide, facing a fiscal crisis.[6]

For six midwestern states, the momentum for injury prevention is coming from the regional office of the U.S. Public Health Service (USPHS). By sponsoring a regional workshop on strengthening injury prevention efforts, the USPHS hopes to prompt both in-state and regional commitment to the problem of injuries. A participant at that meeting, Shirley Reed-Randolph, Associate Director of the Office of Health Services in the Illinois Department of Public Health, has seized the opportunity. She now leads an injury control working group within the department that includes representatives from numerous divisions of the department. In addition, John Lumpkin, Associate Director of the Office of Health Regulation, has taken the lead to form a regionwide coalition on injury prevention. (For a discussion of coalitions, see Chapter 5.)

As these examples show, direction in injury prevention can come from the local, state, or regional level. Although the tasks of preventing injury may differ at each level, each can complement the others. For example, developing a statewide program to support injury prevention efforts is a job for a state agency, whereas carrying out projects at the local level can better be done by organizations that are closer to the community.[7]

Only with competent leadership can agencies perform their roles. Lead agency staff "must have the skills to organize political, community and professional leaders to use their influence and power to carry out injury prevention strategies."[3] Often, acquiring these skills comes only from experience.

IDENTIFYING THE PROBLEM

Problem identification is the process of deciding which injury you want to prevent in what population and with what resources. This requires gathering information that will be the raw material from which goals are set, objectives named, and interventions selected. The sequence of events in problem identification is not important; the accomplishment of the tasks is. Figure 1 illustrates the elements of problem identification. The tasks are to determine the nature of the injury problem, the characteristics of the population, the resources available to address it, the community's perception of the problem, and the political environment. Dis-
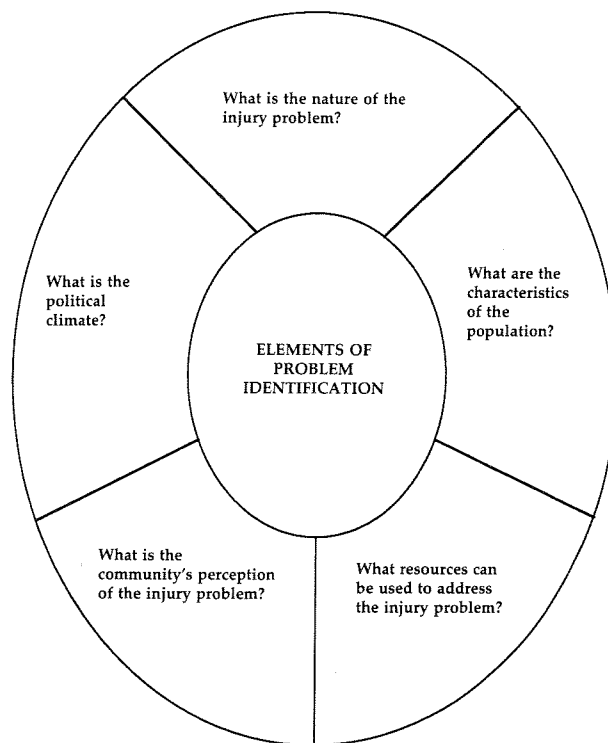

Figure 1. Problem identification.

played as a circle, this is a process that can be entered at any point.

What Is the Nature of the Injury Problem?

Any number of things can prompt a person or group to decide to take steps to prevent injury: compelling data, a well-publicized injury or death, the availability of federal funds, a directive from an informed supervisor, a call from a motivated citizen. Whatever prompts the initiative, data collection and analysis help determine which injuries need to be addressed. Data can also be used to convince community members and decision makers of the importance of the problem in their community.

Data can portray the overall injury problem or tell more about an injury problem aleady suspected, as happened in Dade County, Florida. There, the injury control program grew out of county rodent control inspectors' observations that poor housing conditions were jeopardizing the safety of residents. The health department collected data specifically on injuries caused by home hazards and confirmed the problem. In Connecticut, on the other hand, it was only through a broad investigation of death data that the Coalition to Prevent Childhood Injuries identified child homicide as a leading cause of death for certain age groups. It then was possible to target child homicide for further study and development of preventive efforts.[8]

An investigation of patterns of injury in a community can determine the following patterns:

- *Problematic injuries:* Which injuries occur most frequently and how severe are they? This provides a framework for deciding which injuries to target and suggests the organizations and interests that need to be involved.
- *Populations at risk:* Which groups experience a disproportionate number of target injuries? This is useful in selecting a target population.
- *Injury causes:* What circumstances contribute to the injuries? This provides a basis for selecting appropriate interventions.[9]
- *Injury costs:* What is the economic burden of injuries? Do the costs warrant spending money on prevention and control? Who pays the costs?

"In order to avoid wasting time and resources on an extensive data collection effort, be sure to search out what is already known about . . . injuries in your community."[3] This will provide indications of what additional local data might be needed to understand your community's injury burden. Chapter 2, "Learning from Data," and Chapter 3, "Working with Data," discuss local and national data sources and their uses.

Data from published studies and reports are valuable, but nothing is more compelling than current, accurate local data. The Missouri Division of Health's burn prevention program, created in 1969, is an example of matching a problem with a solution. The data collection, done through at-home interviews with community residents, uncovered who was being burned, why and how they were burned, the extent of their injuries, what kind of first aid was received, and what some possible solutions might be. "When these data were combined with knowledge of the accident processes encountered, it was hoped that light would be shed on the causes, effects, and solutions of the problems of fire and burning injuries. In retrospect the information obtained was invaluable in planning, development, and execution of a prevention and control program."[10]

What Is the Community's Perception of the Injury Problem?

Data can tell a lot, but they cannot determine which injuries most concern people or compel them to act. Only a thorough understanding of the community will provide that. "Too often, health programs are 'dropped' into the middle of a community with little attempt to understand the political, sociocultural, and economic environment into which they must fit if they are to survive and to effect their goals."[11]

Community outreach "involves the creation and maintenance of open communications pathways between the program and its target groups and between the program and surrounding organizations."[11]

What if data reveal that falls are the leading cause of injury in young children but the community is up in arms over the more publicized (though less frequent) problem of school bus crashes? "Lend an ear. Sometimes you have to work on issues that your data show are not the most serious ones if you want the community to accept the concept of injury prevention and have confidence in your agency," said Susan Gallagher, Director of the Harvard Childhood Injury Prevention Resource Center (personal communication). By using people's perceptions of problems creatively, it is possible to educate them about injury. The community's concern for one type of injury can be used as an entry to explaining the toll of all other injuries. Although Jessica McClure's injury is not a common one, for example, it could have been used to illustrate children's high risk for injury or day-care safety issues and to develop interest in prevention programs. "Setting priorities for local injury programs means more than counting numbers to determine frequency and severity. Concerns about any kind of injury can lay the groundwork for a focus on more critical injury problems in the community," said Gallagher (personal communication). In addition, a community needs assessment can benefit an agency by raising its visibility and generating understanding of and support for other needed programs.[12] Telephone surveys can be useful tools in conducting a needs assessment.

The Philadelphia Injury Prevention Program (PIPP), a comprehensive injury control program based in the Philadelphia Department of Public Health and funded by the city and the Centers for Disease Control, made community assessment a priority from the start. Amy Wishner, Coordinator of Surveillance and Prevention for PIPP, reported, "People in our community were interested in pedestrian injury out of proportion to what our data were showing. Nonetheless, we devoted a fair amount of attention to the problem. Because it is so visible, unlike falls, stabs, or assaults, it influenced the direction we took" (personal communication). To take best advantage of community interest in preventing a certain kind of injury, some background work should be done early. Certain information should be available, such as data about the community and ideas about what program(s) would work.

Along with collecting facts, it is important to dis-

cover what concerns engage and motivate the community. "We spoke with anyone who had done community work. We called people in other health department divisions to learn about their experiences in the community and obtain community contacts. Then we went out and met those people, explained what we wanted to do, got feedback, and asked for more names of people to talk to," reported Wishner. "Community support for injury prevention programs is not only advisable, it is essential. . . . Our ultimate goal was helping people to help themselves. People were responsive to this." Wishner said they emphasized local control over the program. "We said, 'We can't do it without your participation. If you don't want it, it's not going to be here.' It was important to be explicit that they had that control" (personal communication).

It is important to find out what kinds of injury prevention projects have been tried before in the community, whether they have worked, and whether they are still in place. How were the projects received? Are residents aware of effective injury prevention methods? It is also important to learn about the community through the local newspaper, perhaps by clipping stories that illustrate both the community's injury problem and the need for more information about it.

Ideally, injury prevention programs should be preceded by an analysis of what the target population knows about injuries and their prevention; which individuals and groups are at the highest risk for what injuries; what types of injuries occur; and when, where, and under what circumstances they occur. By comparing data over time, one can observe changing injury patterns, determine whether interventions have affected those patterns, and perhaps identify alternate interventions.

At the same time, subjecting a community's heartfelt concern about a certain kind of injury to time-consuming data analysis can extinguish the initiative to commit resources and time to the program. It is important to strike a balance, designing the program carefully but also putting it into effect as rapidly as possible.

What Resources Can Be Used to Address the Injury Problem?

In the early 1980s, traffic safety was a serious problem in San Antonio, Texas. City authorities decided that both the government and citizens must play a role in improving safety. "Target '90—Goals for San Antonio," a committee formed by Mayor Henry Cisneros, recommended that the lead be taken by an existing grass-roots organization, Community for Automobile Responsibility and Safety (CARS). With CARS coordinating a multifaceted program (covering drunken and drugged driving, safety belt usage, pedestrian safety, motorcycle safety, and courteous driving), an extremely broad range of city groups is active. Collaborators include the police department, schools, municipal offices, military bases, courts, the state department of transportation and public highways, numerous private businesses, and health and civic organizations.

Involving the community and getting to know its resources is a key step in getting an injury prevention program off the ground. The first tasks are to become acquainted with others who are interested or active in injury prevention in local, state, and federal government, in other community organizations, and in the private sector. Generate their support. Use the relationships to advance or mobilize an injury prevention program, and locate existing data sources and legislation to prevent injuries. Find out what other agencies have pursued or are pursuing. In some cases, agencies can co-apply for funding. Figure 2 lists some of the agencies that should be contacted.

It is essential to make contact with more than the obvious safety and government groups. Talking to individuals such as the community librarian or a service club president can be helpful. He or she can identify the "go-getters," not just the titular leaders. "Discover the informal community power structure; key leaders may be found in unlikely places."[9]

Physicians, especially pediatricians, can be influential in building community commitment to injury prevention. "As an advocate for child safety, the pediatrician can use professional credibility and influence to mobilize community efforts in injury prevention. The pediatrician may take a leadership role and initiate a program, or may provide support to established groups in reaching common goals."[13]

If influential leaders have not been included in the process from the beginning and are not sympathetic to the problem, they could sabotage the effort. For example, in one New England town a powerful local general practitioner, who had not been contacted personally at the initiation of a community injury program sponsored by the state, opposed the program at every turn, insisting that the community did not have an injury problem.

Another task is to find out where financial resources exist and whether there are resources that have never been tapped or ones that have been solicited but rejected. Similarly, it is wise to conduct an inventory of the community's media outlets, in-

Fire departments

Police departments

Elderly services agencies

Hospitals

Emergency medical services

Group medical practices

Voluntary agencies

School nurses and teachers

Professional organizations for physicians, nurses, health care workers

Medical schools

Schools of public health

Schools of nursing

Pharmacists

Health and other educators

Department or board of health

Department of motor vehicles

Department of parks and recreation

Department of social services

Department of transportation

Department of mental health

Department of education

State alcohol and drug abuse authority

Children's services agencies

Red Cross

Poison control centers

Local businesses, churches, and labor groups

Parent/teacher associations

American Academy of Pediatrics' chair for Accident and Poison Prevention Committee

Health maintenance organizations

Insurance companies

Social and civic groups

Community officials (city council, mayors, legislators, judges)

Legislators

Architects

Engineers

Mothers Against Drunk Driving (MADD), Students Against Drunken Driving (SADD) chapters

Regional offices of federal agencies: U.S. Consumer Product Safety Commission, National Highway Traffic Safety Administration, U.S. Public Health Service

Figure 2. Possible collaborators in injury prevention.

cluding newspapers and radio, television, and cable television stations. It is important to build relationships with these organizations early on.

Has a community task force or coalition been assembled around a specific injury cause, such as drunken driving? If so, have they made recommendations? Find out if the community has accepted or rejected injury prevention efforts in the past, and why.

What Are the Characteristics of the Population?

The demographic, geographic, and economic makeup of a community guides many program decisions. Learn as much as possible about the population, its environment, the various neighborhoods, and where residents receive medical care. Questions to ask: What percentage of the population is elderly people and children? What services are available to them? Are there particular places or intersections where many injuries of a certain type

occur? Are there streets with a high incidence of motor vehicle crashes? What occupations are common in the community, and what are the hazards associated with them? Do specific recreational hazards exist? Does the condition of housing contribute to injuries? Does a common transportation mode or weather condition create a special risk?

What Is the Political Climate?

It is essential to understand how public policy is formulated in the community. As a public health school dean noted more than 35 years ago,

"We must have knowledge . . . of community organization, of the power structure of that community, of the political structure, of health laws and regulations, of attitudes that determine acceptance or rejection of change and development. We must have sophisticated knowledge of education and educational methods, of mores and morals that affect the growth

and development of community consciousness and community action."[14]

There are several questions to pose: Who in the community can influence and authorize public action on or point media attention to the injury problem? Who can seek funds, who has the power to allocate funds, and how can those decisions be influenced? Which would be an effective lead agency? Who are the political, corporate, religious, and social/civic leaders in the community? Who can reach them to enlist their support? Is there relevant injury prevention legislation?

Although vital, progressive programs can thrive (albeit with harder work) without the active support of a commissioner, department head, or other supervisor, their support is an important political asset. One injury prevention worker in a state health department said that her commissioner's sentiment about her federally funded injury prevention initiative was, "If you want to do it, go ahead." He would sign key letters, proposals, or reports, but he would never name injury as a priority or fund it. The lack of support did not impede the program as long as it had outside funding, but after that support ended, his marginal interest could be damaging. However, by taking even this degree of support and running with it, a staff member can create a program useful and popular enough to get continued funding. Successful efforts often need support from more than one funding source. Leadership entails persistent, creative persuasion of colleagues, supervisors, the media, and legislators about the importance of injury prevention.

THE SYSTEMS APPROACH TO DEVELOPING A STRATEGIC PLAN

The information collected to identify the injury problem and understand the community can also be used to develop a strategic plan to control and prevent injuries. Because a successful program will require change on the part of individuals, agencies, and environments, the program must address all three. "Injury control demands a systems approach because of the very nature of the multiple, concurrent actions that must be taken together by both individuals and agencies."[3]

The systems approach reflects a recognition of the comprehensive nature of the injury problem and the need to develop equally comprehensive solutions. Neither new nor complex in theory, this approach has been used in campaigns to reduce infectious disease and alcohol-impaired driving.

A good model for injury prevention comes from the development of trauma care systems. Their de-velopment, beginning in the 1970s, grew from the recognition that effective, often life-saving, care could not be rendered if the hospital were the sole focus of attention. Specialized trauma care centers or units could not be an end in themselves because "in the absence of a system you end up with no control over who gets to the trauma center or how" (R. Cales, personal communication). Therefore, these well-staffed, well-equipped facilities "are of little use . . . unless they are integrated into a trauma care system that provides continuous treatment from the moment of injury through discharge or death."[15]

In providing effective trauma care, the systems approach dictates that a lead agency bring together and coordinate institutions and agencies involved in communications, personnel training, transportation, and hospital management. A statewide office, such as the health department, may often be the leader in some injury prevention efforts but at other times will be called on to collaborate with other lead agencies.

We will learn about trauma care systems in Chapter 18, but the lesson for injury prevention and control is clear. In developing a program, it is critical to draw on and coordinate all the institutions and individuals recognized in the problem identification phase. In this way, even a small, highly focused program can incorporate the comprehensive view that injury prevention requires for success.[16,17]

At both the state and local levels, collaborators in an injury prevention effort must perform eight essential functions:

- Draw on the cooperation of a multidisciplinary group of community members.
- Coordinate existing local and state resources for injury prevention.
- Initiate the examination of injury data and support prevention and control strategies (including support for legislation).
- Create a statewide plan to promote the development of injury control programs at the local level.
- Provide initial state funding of programs based in local communities when possible and help identify other sources of funding.
- Provide technical assistance and training to involved groups.
- Stimulate injury prevention research and training.
- Be aware of the incidence and distribution of injuries over time.

Public health departments increasingly are taking a lead role in injury prevention. Their strengths are as follows:

- *Conveners* bring together groups and experts in-